

The Comparison of the Asset Backed Securities Between China and the USA: Working Mechanism, Regulatory System and Potential Risks

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Abstract. The paper will compare and contrast the asset-backed securities, which are financial products in the shadow banking system in China and the USA. An asset-backed security (ABS) is a financial investment collateralized by an underlying pool of assets. Due to different regulatory systems in different countries, the working mechanism and the potential risks for purchasing asset-backed securities will vary from country to country. Our analysis compares the working mechanism of asset-backed securities in China and the USA, such as classification, credit rating, and investor base. We investigate the different regulatory system of asset-backed securities in China (the so-called New Asset Management Regulations) and USA (the Dodd-Frank Act) in order to find out the different potential risks that are brought by the securities. Based on our research, we evaluate the asset-backed securities including long-term effect vs short term effect and pros and cons on different stakeholders.

Keywords: New Asset Management Regulations, Asset-backed securities, Dodd-Frank Act

1. Introduction

The paper surveys the different working mechanisms and regulatory systems of asset-backed securities in China and the USA.

Lehman was the fourth-largest investment bank in the United States, with 25,000 employees worldwide in 2008. It had \$639 billion in assets and \$613 billion in liabilities. The bank became a symbol of the excesses of the 2007–08 financial crisis, engulfed by the subprime meltdown that swept through financial markets and cost an estimated \$10 trillion in lost economic output. (Rosalind Z. Wiggins, Thomas Piontek, and Andrew Metrick, 2019, page 40) One cause of Lehman's demise was its significant exposure to the U.S. subprime mortgage and real estate markets. When these markets began to go down, they sparked a retraction in the "shadow banking

system” for short-term loans as concerns about unknown exposures to securitized subprime mortgages spread to other types of assets. (Rosalind Z. Wiggins, Thomas Piontek, and Andrew Metrick, 2019, page 40) This destructive crisis increased awareness of the regulatory system for asset-backed securities products. Despite the remarkable volume of research about the performance of asset-backed securities during crises, the regulatory system for asset-backed securities is usually ignored by scholars. Therefore, we address the following three questions in the paper: First, what are the working mechanisms and characteristics of asset-backed securities in China and the USA? Second, how is the regulatory system different in China and the USA? Are the differences in regulatory systems causing different risk potentials for asset-backed securities in China and the USA? Finally, what are the pros and cons of asset-backed securities for various stakeholders in the USA and China?

An asset-backed security is a type of financial investment that is collateralized by an underlying pool of assets—usually ones that generate cash flow from debt, such as loans, leases, credit card balances, or receivables. It takes the form of a bond or note, paying income at a fixed rate for a set amount of time until maturity. An ABS usually has different tranch classes, including AAA, AA, BBB, and BB. The senior class, A, has the highest investment rating and, therefore, is the most attractive to investors. Class B usually has poorer credit but higher investment returns compared to Class A since a higher profit will attract consumers with higher incidences of risk. Despite the differences in the levels of securities, the levels of securities are closely related to each other and share common risks. The junior securities will incur all the losses instead of the senior securities. When a crisis comes, all the securities will lose, leading to huge losses. Therefore, it is important to know the regulatory systems for asset-backed securities to avoid the hidden risks that might arise.

The rest of the paper is organized as follows: First, we will compare the working mechanisms of asset-backed securities in China and the USA through credit rating, product differentiation, and investor base. Secondly, we will investigate the ABS regulatory system in China, which is the New Asset Management Regulations, compared to the USA's Dodd-Frank Act. We will then illustrate the potential risks that might happen in the ABS investment process, like a deficiency of credit and liquidity problems. Lastly, we will evaluate the pros and cons of ABS for different stakeholders.

2. The working mechanism and characteristics of ABS

2.1. The working mechanism of ABS

2.1.1. The working mechanism of ABS

The shadow banking system includes a variety of institutions and activities, and asset-backed securities (ABS) are an important part of shadow banking activity. ABS is non-bank-issued and may not be subject to traditional banking regulation. It allows investors to provide funds directly to borrowers, bypassing the need for traditional banks to act as intermediaries. ABS transactions may involve the use of leverage, meaning that the issuer uses less of its capital to support a larger pool of assets. ABS and other shadow banking activities may face different regulatory requirements than traditional bank deposits, which may be more lenient.

Asset-backed securities are financial instruments that bundle together a group of assets that will generate cash flow in the future and issue bonds on that basis. These assets can be loans (such as mortgages or car loans), credit card debt, or any other asset that generates steady cash flow. A simple description is that when someone needs money for financing, the securities company buys his future income, builds a vehicle, and sells the assets of the carrier to different investors one by one. The

securities company receives the money. When future income arrives, it will not go into his wallet; it will go into the vehicle, through which it will be sent to investors. However, not all future income will be distributed to investors, and securities companies will retain part of the income as their income so that their business behaviour has a certain profit.

In detail, issuers of ABS are typically financial institutions that pool their assets together to form a pool of assets. To improve the attractiveness and credit rating of the bonds, the issuer may adopt some credit enhancement measures, such as asset insurance or third-party guarantees. Issuers typically set up a Special Purpose Vehicle (SPV) to transfer a pool of assets to the SPV, which is designed to insulate the assets from the rest of the issuer's business risks. ABS are often divided into multiple tiers, including senior, mezzanine, and subordinate. Different tiers of bonds bear different risks in the event of losses in the asset pool and, accordingly, have different returns and credit ratings. SPVS issues different tiers of ABS and trades them in the capital market. Investors buy these bonds with the expectation of receiving regular interest income and repayment of the principal at maturity.

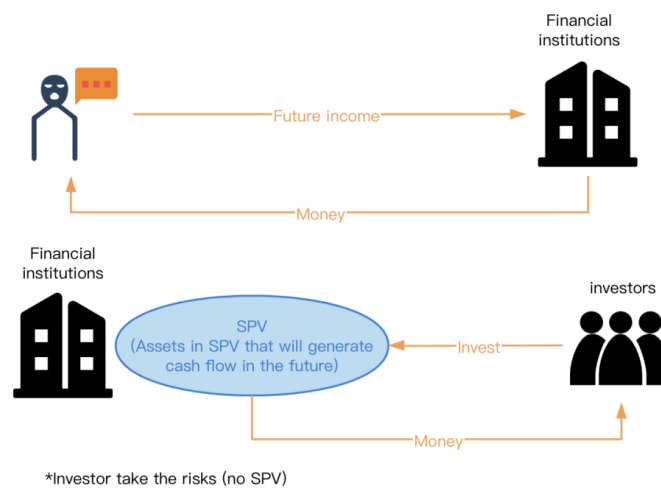


Figure 1. The working mechanism of ABS

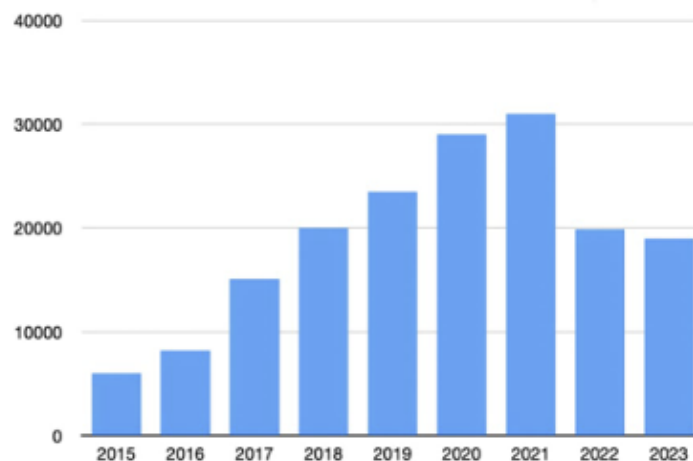
2.1.2. Compare the working mechanism of ABS in the U.S. and China

2.1.2.1. Comparison of asset securitization product classification and issuance

In the United States, asset securitization products are primarily divided into two main categories: mortgage-backed securities (MBS) and asset-backed securities (ABS), with MBS being the dominant type. Post-subprime crisis, the annual issuance volume of MBS has been low (around 2 trillion U.S. dollars), but it surged to 4 trillion U.S. dollars in 2020 due to the upward trend in the real estate market (data source: wind). ABS products are based on various assets, such as corporate loans, auto loans, credit card debt, and student loans. They reached a peak issuance scale of about 800 billion U.S. dollars in 2007 but experienced a significant drop after the subprime crisis, with only about 250 billion U.S. dollars in issuance in 2020 [1]. The fluctuation of the US securities market is significantly affected by market factors. Commercial banks participate in market activities through asset securitization and other means and are subject to strict industry regulation to maintain market order and avoid violating relevant rules and regulations. When American banks participate in

the ABS market, although they also have the demand to provide credit, it is more based on their own business model and investment strategy, and most of the time, they just want to clear the balance.

In China, the types of ABS products are continuously increasing, and Chinese asset securitization products are mainly divided into four types: credit asset-backed securities (Credit ABS), corporate asset-backed securities (Corporate ABS), asset-backed notes (ABN), and insurance asset-backed plans (Insurance ABS). Credit ABS is issued based on bank loans, consumer credit, and auto loans, converting credit assets into securities with higher liquidity, optimizing banks' asset structures, and reducing risks. Corporate ABS is issued based on enterprise receivables, lease claims, and other assets, helping enterprises convert less liquid assets into cash flow to meet financing needs. ABNs are reimbursed by the cash flow generated by the underlying assets and issued in a registered format, registered and managed by the Dealers Association. Insurance ABS refers to insurance companies transferring part of their assets to SPV and realizing diversified financing and risk management of funds through the issuance of ABS or ABNs. In China's ABS market, credit ABS, enterprise ABS, and ABN are mature and occupy the mainstream position, while the development of insurance ABS is relatively lagging. The issuance scale of credit ABS is stable at about 180 issues per year, with a scale between 800 billion yuan and 1 trillion yuan, as shown in Figure 2. The company's ABS has grown significantly, with both issuance and scale increasing by more than 40% year-on-year in 2020. Despite the small base, the annual growth rate of ABN nearly doubled. However, in 2024, ABS issuance may fall back due to economic recovery and a lack of demand [2]. In China, banks sell a large number of loans to ABS mainly to solve liquidity problems, optimize the balance sheet structure, reduce financing costs, and diversify risks to meet regulatory requirements. To circumvent certain regulatory restrictions, many ABS buyers are also banks, reducing the size of loans on their books or improving other financial metrics, a practice that only helps banks adjust their finances in the short term.



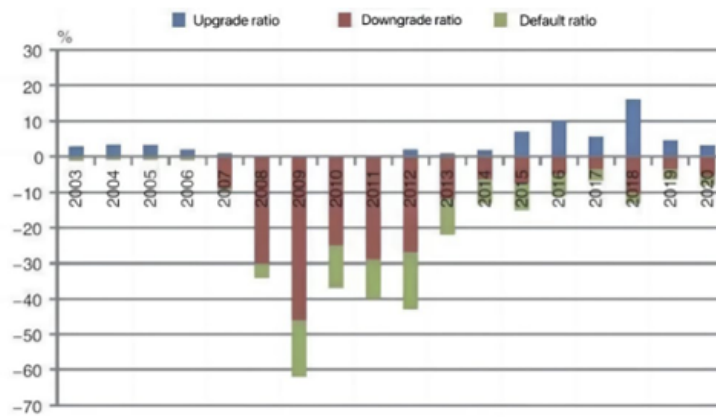
Source: Wind financial Terminal

Figure 2. Annual issuance scale of ABS in China(unit in 100 million RMB)

2.1.2.2. Comparison of credit rating

In the United States, the credit rating process for asset securitization products is very mature and strict, and rating agencies play a significant role in the market. Whether it's ABS or MBS, the rating process is equally rigorous. For instance, between 2008 and 2011, there were almost no rating upgrades for U.S. Residential Mortgage-Backed Securities, but the proportion of rating downgrades

sometimes exceeded 40% as shown, with an average downgrade of six sublevels and a default rate of over 16% [1]. However, in recent years, rating upgrades and downgrades for RMBS have gradually balanced out, and the default rate has dropped to about 3%, with the default rate for investment-grade products falling to 0.1%.



Source: S&P Global Ratings

Figure 3. ABS rating changes in the U.S.

China's credit rating market is still relatively new, and the standards and methods of rating are still being improved. Moreover, Chinese rating agencies are working to enhance the accuracy and transparency of their ratings and are also incorporating more international rating standards and methodologies to bolster confidence among market participants. On March 8, 2024, the China Association of Bank Market Dealers issued two rating provisions, which will be implemented on June 1, 2024. The purpose of these regulations is to strengthen the credit rating management of the interbank bond market, standardize the rating business, and make the market develop more healthfully. To further promote the connectivity of the bond market and improve the self-regulatory level of credit rating agencies, the Measures for Joint Market-Based Evaluation of Credit Rating Agencies in the Bond Market were formulated on March 15, 2024. This clause establishes a market-oriented evaluation index system and makes the evaluation system for rating businesses more perfect.

2.1.2.3. Comparison of investor base

The U.S. asset-backed securities market is a large and mature market that draws a variety of investors. There are pension funds and insurance companies that prefer steady returns, hedge funds that look for opportunities to make big profits, and investors from around the world, including foreign pension funds and sovereign wealth funds, who are attracted by the liquidity of the U.S. market. Banks and savings institutions might also buy some ABS as part of their investment portfolios. Although individual investors may not purchase ABS directly, they can invest indirectly by buying mutual funds or exchange-traded funds (ETFs). Simply put, the U.S. ABS market is like a bustling marketplace where all kinds of buyers can find what they're looking for.

China's asset-backed securities market is evolving, with commercial banks and non-legal people as the main investors. "Non-legal" here refers to an organization that does not have the status of a legal person but can legally engage in civil activities in its name. These include sole proprietorships, partnerships, and professional service agencies that do not have legal personalities. A firm can be

either a legal person or an unincorporated organization, depending mainly on its specific organizational form and legal status. In the ABS market, non-legal person investors may include some smaller financial institutions, investment funds, or specific purpose vehicles (SPVS). Although non-legal people also have some participation in the ABS market, it is difficult for them to compete with banks to become dominant investors due to limitations in terms of capital scale, risk tolerance, and market position. There may be a cooperative relationship between the bank and a non-legal person, such as when the bank acts as the issuer or underwriter of ABS and sells ABS products to the unincorporated investor. Commercial banks can convert part of their loan assets into securities that can be traded in the market, and the sale of these securities can release the capital occupation of banks and enable them to lend more funds. In China, banks are not allowed to lend more than a certain level, and to avoid government regulation, they sell and buy ABS themselves. As the largest investor in ABS, the bank reflects not only its business innovation and risk management needs but also its compliance with and adaptation to regulatory policies as a financial institution. In other words, a large proportion of banks set up loans to ABS to solve regulatory problems. At present, with the continuous improvement of regulatory policies and changes in the market environment, this phenomenon may be reduced. The following diagram represents the Chinese ABS investor structure.

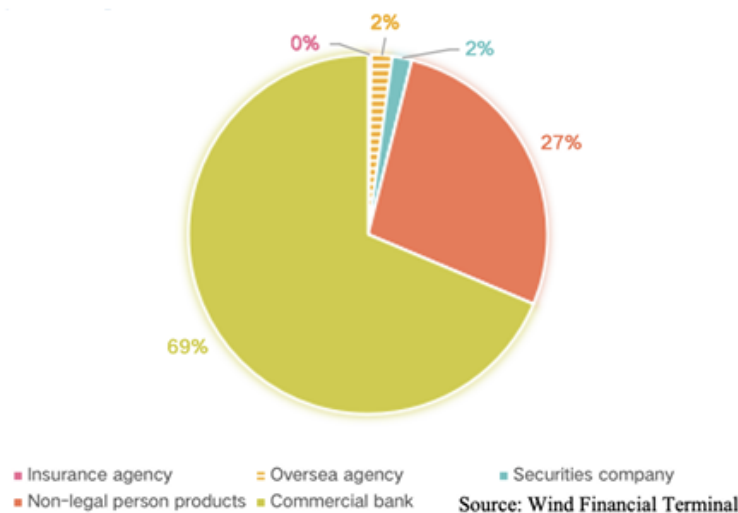


Figure 4. Proportion of Chinese ABS investor structure

2.2. The characteristics of ABS

2.2.1. The characteristics of ABS

Shadow banks are defined as financial intermediaries that provide credit, liquidity, and maturity transformation but do not have direct access to central bank support or government guarantees. In their operations, shadow banking needs to deal with many processes, one of which is securitization, which involves the process of turning loans into securities that can be sold to investors, which requires grouping loans, packaging them into securities, and selling them as a way to provide credit and finance outside of traditional banks. Securities backed by loans and receivables are called asset-backed securities (ABS). The ABS plays a crucial role in any kind of market-based financial system, especially leading up to a financial crisis. ABS pass on the loan repayments to investors as interest payments and principal repayments and are usually divided into different parts, called tranches, each with a different level of risk. This way, securitization spreads the credit risk among the investors

holding these different tranches. ABS, as tradable securities, are backed by future cash flows from underlying assets, which are structured to enhance credit. They have three key characteristics. Firstly, ABS are interest-bearing securities traded on secondary markets, offering investors regular interest payments and flexibility in buying and selling. Secondly, ABS creditworthiness depends on the underlying asset pool, such as mortgages, car loans, and credit card debt, rather than the issuer's overall credit. Thirdly, ABS uses risk isolation techniques, typically through Special Purpose Vehicles (SPVs), which separate asset pools from other business risks. These features make ABS an important financial tool, providing diverse investment opportunities and helping financial institutions manage risk and optimize balance sheets.

2.2.2. The characteristics of ABS in China

China's shadow banking refers to financial activities that act like banks, such as lending and borrowing money, but they do not follow the same rules as regular banks. In China, shadow banking usually provides off-balance sheet loans and trust financing to infrastructure and real estate enterprises, which are hard to obtain from traditional commercial banks. The main reason that traditional banks hesitate to offer such financial services is due to regulatory constraints and risk concerns. Traditional financial systems are typically supported by liquidity provided by central banks and are thus under strict control. However, shadow banks usually have no or less supervision. Once they face major risks, they can only rely on themselves to solve them. There are a large number of unauthorized financial institutions, forming a situation of "finance run by all the people." Online financial platforms were initially meant to serve only as information and payment intermediaries. However, some of these platforms began to engage in credit activities, such as providing loans. For a period, these institutions operated without adequate regulation. Many of the products they offered promised guaranteed capital or minimum returns, but these promises were not always kept. Additionally, there were issues with concealing risks, exaggerating benefits, and failing to disclose information promptly. These practices led to financial crises that were difficult to resolve. In product sales, there are also problems of concealing risks, exaggerating benefits, and failing to fully disclose information promptly, resulting in a financial crisis that is difficult to resolve. Once a major risk occurs, it can only rely on self-rescue. However, its self-rescue capabilities are limited due to a general lack of capital and reserve reserves. These activities go beyond regular bank loans and bond investments and involve credit, maturity, and liquidity transformations.

Meanwhile, the ABS market in China is expanding quickly thanks to the large amount of investment from both domestic and foreign institutions. The main reasons for investors choosing the ABS market are its high returns, low default rates, and the lack of better investment options due to low global interest rates. During the COVID-19 pandemic, China's ABS market has remained strong. As of October 2019, the total value of issued ABS products reached approximately CNY 2.2 trillion. As shown in Figure 5, after COVID-19 recovered, early default rates stabilized, suggesting the worst financial situation has been surpassed. The M1 indicator returned to pre-epidemic levels. Among rated RMBS transactions, the 1–30-day default rate improved in the second quarter of 2020, falling to about 0.3% in June from 0.8% in February. The default rates for M2 and M3 also decrease. However, the default ratio for the M4+ ratio (with more than 90 days past due) increased as overdue loans affected by COVID-19 are still outstanding, resulting in the M4+ ratio reaching 0.43%. The M4+ ratio is expected to continue to rise slowly as early overdue loans continue to shift to later overdue loans. In addition, by 2020, the total value would have reached CNY 2.9 trillion, a 23% increase from the previous year and more than double the amount recorded in 2018 (as shown in Figure 5). This growth has been facilitated by regulatory reforms that expanded the types of assets

eligible for ABS, resulting in larger and more frequent issuances. These reforms have also enhanced market accessibility, attracting a broader range of participants from both domestic and international markets.

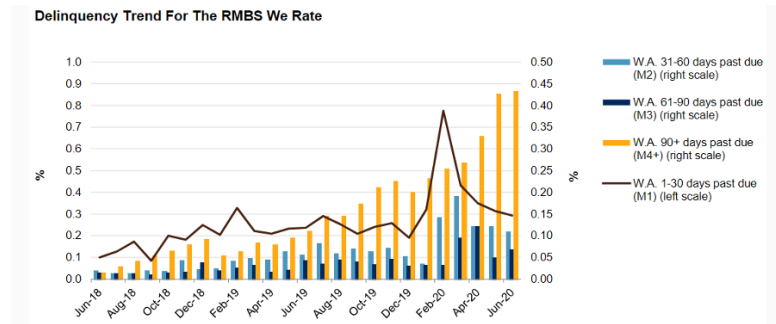


Figure 5. Delinquency trend for the RMBS

Source: China Securitization Performance Watch 2Q 2020: The Worst May Have Passed.

2.2.3. The characteristic of ABS in USA

In the United States, shadow banks' market share in mortgage origination has nearly doubled from roughly 30% in 2007 to 50% in 2015. They attribute this mainly to stricter rules for traditional banks following the financial crisis. The tougher capital requirements shifted lending from banks to peer-to-peer (P2P) lending in Germany after 2010 [3]. Shadow banks had taken a step further to fund corporate loans when traditional banks lacked capital. Unlike P2P lending, these shadow banks provide funding for loans directly, rather than just connecting borrowers with lenders [4]. As for the ABS, it is noted that in the US, the most common assets used for ABS are auto loans and credit card debts. Less common assets include equipment leases, music or film royalties, and municipal parking ticket debts. As shown in the figure below, the ABS experienced a constantly high amount of above 200 billion USD between the years 2004 and 2008, before going into a sharp fall in 2009, 2010, and 2011, before restoring to its gradual growth (Figure 6). This could be due to the reciprocal effects of the Great Recession in 2009, which had the worst economic downturn in the U.S. since the Great Depression [5].

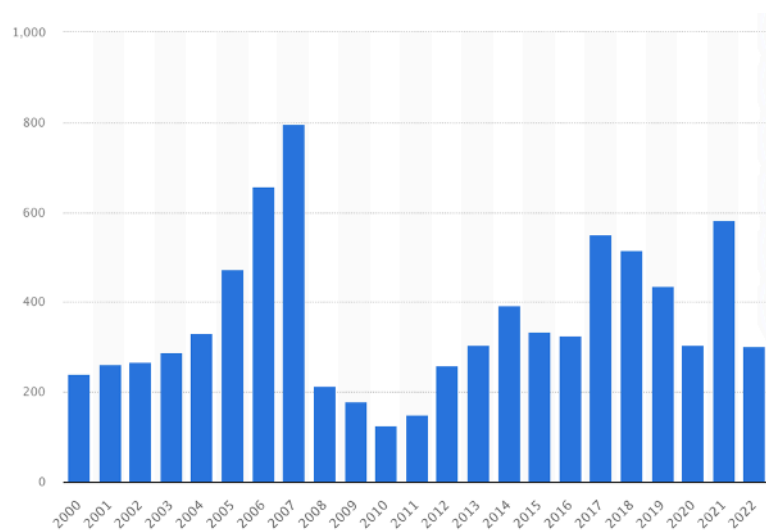


Figure 6. Issuance of asset-backed securities in the United States from 2000 to 2022

*value in billion U.S. dollar

Source: Statista. (2023). Issuance of asset-backed securities in the United States from 2000 to 2022.

2.2.4. Compare and contrast

In general, China and the US have differences in their management of ABS. The primary reason that gives rise to this difference is that in the US, ABS mainly relies on market mechanisms, while in China, the government controls more power in market management. As a result of this, the two countries could have different management of ABS. The Chinese system is more government-centric and dependent on assurance from both banks and government involvement. The China Securities Regulatory Commission and the People's Bank of China are key regulators, and they are facilitating the introduction of more ABS and increased market participation. This has given the ABS in China greater governmental support and efforts. With detailed government support in mind, China launched a pilot project for securitization in 2005, with China Construction Bank and China Development Bank becoming the first banks to issue securitization. Subsequently, China Orient Asset Management Company and China Cinda Asset Management Company also joined the issuance ranks, and the pilot gradually expanded to more than ten financial institutions, mainly conducting securitization of credit assets. During this period, regulators clarified accounting and tax treatment rules, expanded the scope of allowed products, strengthened information disclosure requirements, and allowed ABS to be pledged in the repo market. However, the outbreak of the global financial crisis at the end of 2008, especially due to the securitization of subprime mortgage loans in the US, led to the suspension of China's ABS pilot program. In 2012, the ABS scheme was relaunched in China, with newly introduced risk retention requirements stipulating that issuers must retain at least 5% of subordinated bonds. This requirement makes ABS issuance less attractive. In mid-2013, the ABS market expanded again as the State Council pushed to shift risks away from the banking system. Then increase the quota, reduces the risk reserve requirements, and gradually change the examination and approval system to registration system. ABS issuance has risen rapidly, and the introduction of the corporate asset securitization pilot program has further promoted market development, allowing more securities firms to participate.

On the other hand, the US has its market regulated with stringent requirements and oversight from multiple agencies like the Securities and Exchange Commission (SEC). This makes policies regarding ABS more complicated. When the US system faced vulnerability during the 2007-2008 financial crisis, Chinese shadow banking remained stable due to government backstops [6]. The management of the COVID-19 pandemic and the restoration of ABS growth in China is further proof of higher ABS stability in a system that receives government support.

Moreover, China differs from the US in terms of how its shadow banks create money. In the US, shadow banking acts like regular banks and needs careful study of who's involved, what they do, and new ideas in the market [7]. However, in China, there are less strict requirements for shadow banks about the disclosure of financial risks. There are only simple duration disclosure requirements in China, which are not enough for the complex structure of ABS products. This insufficient disclosure of information can then lead to investor concerns about transparency. This makes accurate valuation and risk analysis difficult, affecting investment willingness. Investors and third-party market institutions cannot accurately grasp the product scale, income realization, and investment ratio and, thus, cannot make accurate decisions. Therefore, despite being able to manage huge economic disruption during the financial crisis better, China is more prone to regular economic crises, depending on whether the various stakeholders involved can maintain their profits.

3. Risks analysis for ABS in China's and USA's shadow banking

3.1. Introduction of regulatory mechanism in China's shadow banking and USA's shadow banking

3.1.1. China's shadow banking regulatory mechanism - new asset management regulations

The New Asset Management Regulations (NAMR) are jointly issued by the People's Bank of China, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission, and the State Administration of Foreign Exchange. NAMR includes six main regulations: the certification of accredited investors, breaking the bailout, dealing with the maturity mismatch, removing the operation of capital pools, solving more aspects such as multiple nesting, and suppressing passageway business, which inhibits shadow banking business [8]. (Figure 7)

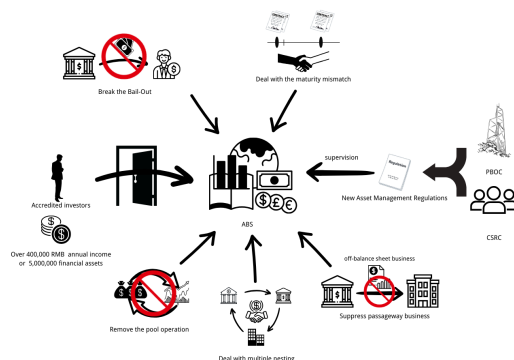


Figure 7. New asset management regulations

1. Accredited investors. To guarantee the competence of individual investors they can take the risk of market volatility, regulatory departments restrict some participants and set a threshold to protect ordinary families' property. For individual investors and institutional investors, respectively, more detailed provisions are: more than 2 years of investment experience and meeting one of the following conditions: family financial net assets of not less than 3 million RMB, family financial assets of not less than 5 million yuan; or the average annual income of the past 3 years is not less than 400,000 RMB—financial authorities consider it a qualified investor.

2. Break the bail-out. As the policy to protect the interests of investors before 2018, Bail-Out had removed all the investing risk from the institutions' shoulders rather than the investors themselves. However, it is natural that all market participants should take the risk of it, not just institutions that spun off the assets via ABS (assets-backed security). Thus, its disappearance becomes a certainty and, in turn, persuades a host of individual investors, which protects their pockets. Article 6 of the new Regulation on Asset Management explicitly prohibits the bailout (out of protection of the law) and provides more detailed provisions on the recognition and punishment of the bailout. Asset management business originally belonged to the off-balance sheet business of financial institutions. Financial institutions engaged in asset management business do not promise to guarantee capital and income.

3. Deal with the maturity mismatch. Admittedly, a maturity mismatch can reduce the cost of funds. For instance, A wants to buy a two-year trust product with an annual return of 12%, but he does not have enough money, so he borrows 500,000 RMB from B. B says that he can only lend it to

him for one year (maturity mismatch) and needs to pay 6% interest. After weighing the decision, A decided to buy the trust first and then ask someone else to borrow it. A year later, B came to A to ask for money; A turned to C for an extra 500,000 RMB and promised that he would pay 6% interest in a year. Another year later, the trust product was due to be redeemed, and A paid back C's money and got his principal and profits. However, the rupture of A's money may lead to the fact that A cannot pay B's money back! To reduce the risk of a maturity mismatch, financial institutions should strengthen the duration management of asset management products.

4. Remove the pool operation. The pool operation, which aims to force up the price of some stocks, bonds, or futures improperly or even illegally, disrupting the normal orders of the market, is irrefutable to be denied in China. Financial institutions should achieve separate fund management, separate accounting, and separate accounting for each asset management product and are banned from carrying out activities involving rolling issuance and collection operations and separate pricing feature capital pool operations.

5. Deal with multiple nestings. To guarantee the transparency of trading and suppress the disguised holders, the whole process of multiple nesting should be clean and clear. For multiple nested asset management products, the final investor of the product is determined upward, and the underlying asset of the product is determined downward.

6. suppress passageway business. Given that the investment banks tend to circumvent the regulation, they turn to a couple of special-purpose vehicles, or SPVs, for help and ask them to tackle their off-balance sheet business. The whole process of this is the so-called passageway business. To prevent this, regulatory departments demand that financial institutions not provide asset management products to other financial institutions—which may cause money idling between institutions rather than stimulating the real economy—to avoid the passageway business required by investment scope, leverage constraints, and other regulations.

3.1.2. USA's shadow banking regulatory mechanism - Dodd-Frank Act

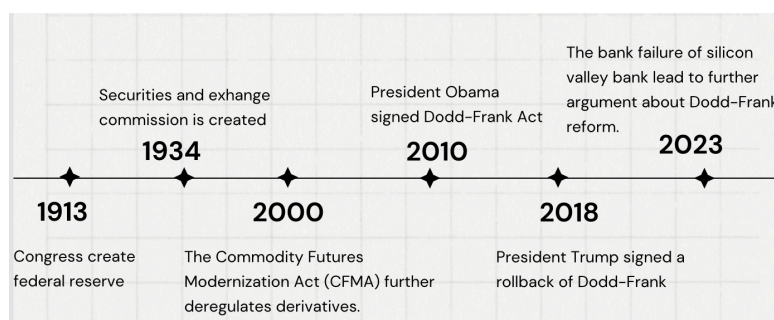


Figure 8. The development of regulatory system in USA

Source: CFR research

The flow chart illustrates the evolution of the regulatory system in the USA's banking industry. In 2000, the Commodity Futures Modernization Act further deregulated derivatives, making the trading process more open and leveraged. However, improvements were made in the regulatory system for the banking industry, particularly for shadow banking, following the subprime crisis of 2008. President Obama signed the Dodd-Frank Wall Street Reform and Consumer Protection Act on July 21, 2010, which introduced the following changes:

The Dodd-Frank Act requires more derivatives to be cleared and traded through regulated exchanges, the reporting of derivatives remaining in the OTC market, and the registration of certain

derivatives dealers and large traders with appropriate regulators.

Dodd-Frank also established the SEC Office of Credit Ratings to address accusations of credit rating agencies providing false investment ratings before the financial crisis, ensuring the credibility and reliability of credit ratings.

The Volcker Rule prohibits banks from engaging in proprietary trading of "risky" assets and certain relationships with risky investment funds. It also restricts banks from acquiring or retaining any equity, partnership, or other ownership interest in or sponsoring a hedge fund or a private equity fund.

These regulations aim to prevent large-scale banks from going bankrupt, as they are considered "too big to fail." However, most crises are caused by debt defaults, where borrowers are unable to repay the money and interest within the given time, leading to liquidity and bank run problems. ABS itself is an investor-friendly product, meaning that some of the risks are incurred by the SPV or the issuers. In most securitizations, a sponsor, typically a lender, specialty finance company, institutional investor, or corporation, is involved. If this sponsor encounters financial difficulties, it can seek protection for its assets from creditors under the bankruptcy code, effectively halting all creditor actions. However, in securitization, the Special Purpose Vehicle (SPV) issuing the debt is legally separate from the sponsor. Consequently, if the sponsor files for bankruptcy, the protection granted does not extend to the liabilities of the SPV, and the assets held by the SPV are not accessible to the sponsor's other creditors. This setup provides ABS (asset-backed securities) investors with a layer of protection from any financial challenges experienced by the sponsor.

Therefore, some of the risks are transferred from the investors to the bank itself. The Dodd-Frank Act and the Economic Growth, Regulatory Relief, and Consumer Protection Act that were announced in 2016 do not make any limitations for the borrowers. Therefore, asset-backed securities inevitably lead to some of the risks that will be illustrated in the following paper.

3.2. Potential risk in the duration of ABS

3.2.1. High leverage (both in USA and China)

Lehman brothers (2008) is one of the best-known bankruptcy cases. It is one of the capital adequacy indicators that investors and regulators pay attention to. The relationship between total leverage and capital is often striking. Lehman calculates and reports on this indicator by dividing assets by equity. In November 2007, Lehman reported a leverage of 30.7 times (Lehman 2007,29). The rate was 23.9 times in 2004(Ibid.) and remained constant until 2006, when Lehman adopted a more aggressive growth strategy.(See Figure 9)

Lehman's risky, highly leveraged business model was similar to its peers. Any major investment bank has more leverage than it did before the crisis, a strategy that allows it to maintain limited capital while pursuing growth and profits. Figure 10 compares Lehman's leverage (total debt divided by book capital) with that of its peers. Excessive leverage would be revealed to be one of the factors contributing to the financial crisis [9].

Figure 2: Lehman's Reported Gross Leverage Ratios, 2003-2007

Year	2007	2006	2005	2004	2003
Leverage Ratio Reported*	30.7x	26.2x	24.4x	23.9x	23.7X

*Total assets divided by stockholders' equity.
Source: Lehman 2007, 29.

Figure 9. Lehman's reported gross leverage ratios, 2003-2007

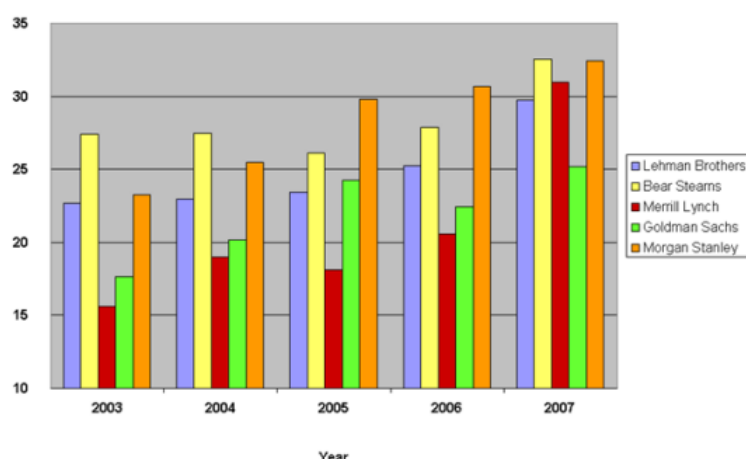


Figure 10. Leverage ratios for major investment banks

Also, we witness a similar case in China, taking Ant Financial as an example, though a decade after the crisis. Ant Financial's day-to-day working capital is not all its own money; conversely, it only needs to take out about 3 billion RMB of capital and then play a circular game of invisible high leverage; it can leverage about 360 billion RMB of loans or even more. Ant Financial's operating methods are straightforward (Figure 11): First of all, take 3 billion RMB as collateral to the bank. The bank will give Ant Financial a loan of 6 billion RMB by a ratio of 2:1 so that Ant immediately has 9 billion RMB of capital. If 9 billion RMB is not enough, there are other ways—asset-backed security (ABS). Ant will have lent out the 9 billion of funds packaged as claims and re-collateralized, so it can borrow another 9 billion, so it has money to lend again. As the cycle goes on in the second round of lending, the ant has another 9 billion in debt, it keeps mortgaging, and it keeps going. After 40 cycles, ants only used 3 billion principal loans to 360 billion funds, hidden behind the leverage ratio of 120 times! And every cycle, Ant Financial will charge 5% of the total money from those cooperating institutions, which is the so-called "technical service fee" in their prospectus. Ant Financial has the largest financial license in the Chinese market, which is essentially a financial reality in the name of science and technology. Ant Financial uses its strong technical advantages to break through the regulatory limit that the number of ABS issues should not exceed five times and makes joint loans with other banks through various channels to form greater invisible leverage and leverage more funds. Ant Financial has also greatly shortened the cycle for the withdrawal of funds. Ant Financial sold bonds to investors, quickly obtained a new round of funds, and then lent to more borrowers, packaged the loan contract for bond capitalization, and then began a cycle of operations so that the 360 billion yuan obtained by high leverage and leverage to get higher returns.

Ant Financial has added 120 times the leverage to make a lot of money but has also hidden huge risks. Ant Financial took advantage of the legal loophole of continuous financial innovation and lag in legal supervision because lending was under the supervision of the People's Bank of China and the China Banking Regulatory Commission, while its ABS was under the jurisdiction of the China Securities Regulatory Commission, so it walked in the grey area of no attention. It can also always find ways to pool loans to leverage more money, like joint lending. In such a large and wide range of lending businesses, there will always be a lot of non-performing loans. Once a large number of users fail to repay their loans, the capital chain will break, and the previous chain of asset mortgage loans and asset-backed securities (ABS) will disappear. Of its vast assets, only 3 billion RMB is Ant's principal. If things go wrong, it could lose up to 3 billion RMB. From Ant's prospectus, the

operation mode of Ant Financial's micro-loan platform is as follows: "Customers initiate loan demands through Ant's platform, bank partners then make independent credit decisions and loan issuance, Ant provides partners with financial technology, customer reach and risk management solutions support, and charges banks technical service fees based on the credit scale facilitated." Also, it emphasizes, "In this process, Ant Financial's business model is open cooperation rather than using its balance sheet to conduct business or provide guarantees. Through technology, the company helps financial institutions provide credit services to small and micro operators, farmers, and consumers, and financial institutions independently make credit decisions and bear risks." That is to say, the banks they work with and the vast majority of Chinese consumers are left to foot the bill. Ant Financial appears to have played a game of sure bets, winning high returns and picking them while losing and shifting the risks and losses to society, the state, and the people.

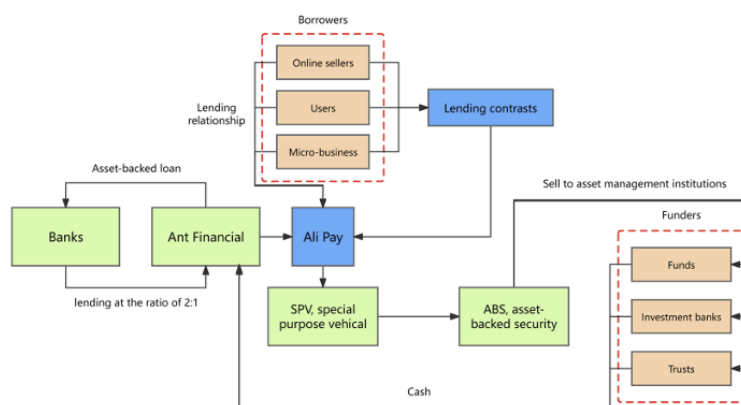


Figure 11. How does ABS in Ant Financial group works

Ant Financial is already the largest lending company in China, and it can be seen from the prospectus that micro-loan services are full of business because they eat capital at low interest and loan users at high interest. (Figure 12) Ant's interest rate spread is very scary. Ant Financial, in the usual propaganda, will intentionally weaken the annual interest rate to blur the user's actual borrowing interest rate level. Since not all consumers have the corresponding financial knowledge, the display and promotion of daily interest rates and monthly interest rates will make consumers mistakenly think that they spend a few dollars a day, and this interest does not seem to be much. If it is converted into an annual interest rate, the ant's annual interest rate is close to the judicial protection limit of 15.4% of private lending rates.

Comparison of APR between Ant Financial & People's Bank of China			
Institutions	Ant Financial	People's Bank of China	
		1 yr loan prime rate	5 yr loan prime rate
APR	15.86%	3.45%	3.95%
APR: Annual Percentage Rate Source: People's Bank of China & Ant Check Later			

Figure 12. Comparison of APR between Ant Financial & People's Bank of China

3.2.2. Deficiency of credit or mortgage assessment (in China)

Based on its financial technology and platform, Ant Financial has leveraged ABS (asset-backed security) to realize 120 times the leverage to make a lot of money, which was mostly used on its micro-loans business. Ant Financial's business models had two different parts: one was proprietary

lending, and the other was joint lending. (Proprietary lending refers to the micro-loan company that, aftermarket access, does not rely on external funds; they only rely on their company funds through the Internet platform, based on fully identifying the borrower's credit qualification and repayment ability, to provide funds for them. This situation has the highest requirements for Internet platforms, which need to have the financial ability to operate independently and strong funds. Joint lending is the joint investment of Internet platforms and traditional banks to launch their platforms under the premise that both parties have the qualifications to lend. On the one hand, this model relies on banks to obtain sufficient funds; on the other hand, relying on the powerful cloud computing capability of the Internet platform, information control and risk identification are carried out, and finally, qualified users complete the loan business through mobile terminals. According to Ant Financial's group network micro-loan business (Figure 13), we can find that in this system, most of the borrowers are not compulsively required a mortgage but credit. Also, Ant Financial's credit assessment relied on the user's past online shopping records provided by Tao Bao, Ali Pay, Yu'E Bao, etc. However, not only is the lending requirement burdening large risks due to the lack of collateral assets, but also the credit assessment is now not totally under the supervision of the Chinese government, and its data resources are still incomplete. Therefore, through ABS, Ant Financial has removed a host of loans to investors that contained a huge number of accepted high-risk loans but only shoulder a small amount of money loss when they became bad debts, which is highly possible (Figure 14). If there are to be more and more bad debts on the market generated by Ant Financial, it may cause an incredible chain effect, influence all the investment banks and individual investors, and attach great economic pressure to the domestic economic system.

Name	Group	Nature of loan	Amount of credit	Term	Advantages	Business model
Ant Micro loan	Individuals	Consumer credit	¥500-50,000	no more than 54 days	Simple application, no collateral required	Proprietary lending, Joint lending
Ant Small loan	Individuals	Cash on hand loans	no more than ¥300,000	3-12 months	Simple application, no collateral required	Proprietary lending, Joint lending
All Small loan	Micro and small corporates	Credit	¥20,000-1,000,000	12 months	Audit quickly, no collateral required	Proprietary lending, Joint lending
Online business loan	Micro corporates, online business sellers	Corporate loans	no more than ¥1,000,000	6 or 12 months	Low interest rates, high quota	Proprietary lending, Joint lending

Table 1. Ant group network micro-loan business Source: LingYi Finance

Figure 13. Ant group network micro-loan business

Source: LingYi Finance

Days overdue (day)	Amount of maturity principal (RMB)	Overdue ratio (%)
0	158,850,000	67
0~30	5,120,000	2
above 30	74,090,000	31
total	238,060,000	100

Source:Ant Financial

Figure 14. Ant check later overdue situation of Asset-Backed Security (ABS) business

4. Evaluation of ABS

4.1. Types of shareholders on ABS in China and USA

4.1.1. China

4.1.1.1. Institutional investors

State Owned Enterprises (SOEs): SOEs are one of the key players in China's ABS market and are usually backed by the government, so investors perceive them as having a low risk of default.

Insurance companies: Characterized by long-term investment strategies, they qualify as major investors in the Chinese ABS market.

Banks: Major players in the ABS market, banks are both issuers and investors.

4.1.1.2. Retail investors

Individual Investors: Participate through wealth management services offered by banks and financial institutions.

High Net Worth Individuals (HNWIs): Part of a diversified portfolio through investment in ABS.

4.1.1.3. Foreign investors

Qualified Foreign Institutional Investors (QFIIs): QFIIs will be allowed to invest in the Chinese ABS market under a specific regulatory framework.

Sovereign Wealth Funds: Invest in ABS for diversification and higher returns.

4.1.2. USA

4.1.2.1. Institutional investors

Banks: main players and major issuers and investors in ABS

Insurance companies: invest heavily in ABS to align with their long-term liabilities.

Different Funds: (Pension Funds/Hedge Funds/Mutual Funds)

4.1.2.2. Retail investors

Individual investors: Participate in ABS through mutual funds, ETFs or direct investments.

High Net Worth Individuals (HNWIs): Invest in ABS for higher returns and to diversify their portfolio.

4.1.2.3. Foreign investors

Foreign banks and financial institutions: Invest heavily in U.S. ABS because of the stability and transparency of the market.

Sovereign Wealth Funds: Diversify their portfolios by investing in U.S. ABS.

4.1.3. Difference between China and USA

China: Dominated mainly by state-owned enterprises (SOEs) and institutional investors, with increasing foreign participation under a regulated framework.

US.: More diversified investor base, including a large number of retail investors and increased foreign participation.

4.2. The long-term effect and short-term effect of ABS

4.2.1. Long term effect

4.2.1.1. Market stability & economic growth

Pros: The asset-backed securities (ABS) markets in countries such as China and the United States have helped to diversify funding sources and spread risk across a broader investor base. On top of that, ABS helps and drives economic development through its efficient mode of helping companies raise capital, because through the issuance of ABS, more funds for the development of large-scale projects will be secured, and abundant capital means that efficient development will be further enhanced under the drive of ABS. This is evident in China's emerging markets, where ABS play an integral part in the construction of large infrastructure projects.

Cons: It is undeniable that if unpredictable factors such as COVID-19 or the financial crisis lead to changes in market conditions and economic downturns, these behaviors may further exacerbate and exacerbate the instability of the economic system for corporations and SOEs that have long relied on the issuance of ABSs to obtain adequate funding.

4.2.1.2. Increased investment opportunities & improved regulatory system

Pros: In the long run, the ABS market has attracted domestic and foreign investors at different levels by providing a variety of investment opportunities. For investors, they need this diversified investment segment to obtain more income and capital, and from a certain perspective, adding more investment opportunities theoretically contributes to stabilizing the market and providing stable returns in the long run. But more importantly, as the ABS market becomes more responsible, the improvement of the regulatory system will provide investors with safer long-term protection, which will undoubtedly help to build a stronger financial system.

Cons: ABS product services are inherently complex systems and regimes, and the complexity they bring can, to a certain extent, confuse investors as the number of investors increases, leading them to make erroneous judgments, such as mispricing or misrepresentation, which can cause serious financial losses to uninformed investors. And over-reliance on ABS may create systemic risk if the regulatory system is not sufficiently competent to manage the ABS market.

4.2.2. Short term effect

4.2.2.1. Liquidity

Pros: The ABS market provides issuers with immediate liquidity, enabling them to quickly convert illiquid assets into cash, which is beneficial for companies that need immediate funding for operational needs or expansion, and more importantly, is critical for companies that need to meet short-term financial obligations or fund urgent projects.

Cons: A short-term focus on liquidity can sometimes lead to a lack of focus on the assets to which it relates, which may arise from quality, contractual or pricing issues, and ultimately increase the risk of default.

4.2.2.2. Market volatility

Pros: In the short term, the ABS market is subject to varying degrees of volatility due to market sentiment, economic changes or regulatory updates, which can affect the stability of investor returns. But ABS can be used to balance and mitigate short-term market volatility by spreading risk across a wider range of investors.

Cons: In times of economic stress, the ABS market itself may be affected, and in the event of volatility for investors, their returns will be affected in the short term.

5. Conclusion

This paper compares the asset-backed securities in both China and the USA through their working mechanisms, regulatory systems, potential risks, and the effects of the product on different stakeholders. We find out that mortgage-backed securities are the major ABS that exists in the market, while China has various ABS products like credit-backed securities, corporate-backed securities, asset-backed notes, and insurance-backed plans. Apart from the different types of ABS for China and the USA, they also have different credit ratings. In the USA, the credit rating process for asset securitization products is more mature than in China's shadow banking system. It can be attributed to two reasons. Firstly, the government has increased concerns about the regulatory system since the financial crisis that happened in 2008. This regulatory system is the Dodd-Frank Act. However, in China, the shadow banking system is now in the development stage. Therefore, the regulatory system is not as mature as the USA's shadow banking system. The regulatory system for China's shadow banking system is the New Asset Management Regulations. The purpose of NAMR includes breaking the bailout, dealing with the maturity mismatch, removing the operation of capital pools, etc. Finally, we evaluate the pros and cons of asset-backed securities, which include a large universe of investible products with a broad range of credit quality and liquidity, an attractive and investor-friendly structure, an attractive risk/return profile, and effective diversification.

The essay is trying to investigate the potential risks of asset-backed securities. Firstly, asset-backed securities might have high leverage rates. Taking Lehman Brothers as an example, it reported a leverage ratio of 30.7x in November 2007. This circumstance also happened in China. In China, Ant Financial secures about 3 billion RMB of capital and then engages in a circular leveraging game to access approximately 360 billion RMB of loans or even more. Although the returns seem to be considerable, there are still high systemic risks associated with them. Apart from high leverage rates, the default of the borrower will also contribute to the crisis. Take Ant Financial as an example. The borrower does not need to mortgage the asset when they are trying to acquire the loan. And this has increased the possibility of debt default. Hence, the Ant Financial Group is in a dilemma. These are the risks that might arise from investing in asset-backed securities.

However, the structure of ABS has lowered the risks through internal credit enhancement and external credit enhancement. Therefore, it is important to evaluate the asset-backed securities in detail before investing.

Acknowledgement

Ye Yingli, Yichen Han, Ruixin Ye, Miaolin Liu and Yibo Xu contributed equally to this work and should be considered co-first authors.

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